



Date: November 18, 2015

Time: 9:00 am to 4:00 pm (adjourned early)

Meeting: Bioassessment Workgroup Meeting

Subject: Proposed 2018 Listing Methodology Meeting Notes

Attendees:

Trish Rielly, MoDNR	trish.rielly@dnr.mo.gov
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The meeting was scheduled to allow stakeholders the opportunity to provide comments or ask clarifying questions regarding the proposed 2018 Listing Methodology Document (LMD). Agenda items were requested from stakeholders prior to the meeting. A suggested agenda was provided, but it was stated that other topics were welcome for discussion. The proposed 2018 LMD discussions started in a format that allowed participants the opportunity to provide page-by-page comments. In doing so, other specific topics or concerns were raised and discussed. Below is a summary of the discussions.

Overview of updates from the 2016 Listing Methodology Document

Trish Rielly provided an overview of the purpose of the meeting and the general updates that were made to the 2016 LMD. Overall, the majority of the updates related to reformatting the document by moving information previously provided in the appendix and blending the information with similar information provided in the main body of the document. Where possible, tables were merged and table footnotes (e.g., Tables B, C and D) were moved under the "Notes" column header. Other updates were more grammatical in nature.

Data Codes

Questions were raised regarding a wording addition to Data Codes Two, Three and Four (page 17), and the reason for the additional wording “composite or plug” and “a minimum of one”. The additional wording was added to clarify what type of sample was actually being collected by the department. It was suggested to add clarification to explain what is involved in a quantitative biological monitoring study. For example, multiple data collection events for a quantitative macroinvertebrate study includes: monitoring of multiple stream reaches and habitat conditions, stream habitat survey, water quality sampling, and the collection of aquatic macroinvertebrate data from multiple seasons. Staff will add additional clarification to this section.

Weight of Evidence Approach

It was noted the italicized sentence below was removed under the Weight of Evidence Approach (page 18). It was suggested that if the process described is being followed, the sentence should be retained. Staff explained that the sentence was inadvertently removed during the LMD update and merging of information. It was agreed that this wording should be maintained.

For those analytes with numeric thresholds, the threshold values given in Table 1.2 (now Appendix C) will trigger a weight of evidence analysis to determine the existence or likelihood of a use impairment and the appropriateness of proposing a 303(d) listing based on narrative criteria.

It was suggested that examples of other relevant environmental data be included with fish, aquatic macroinvertebrate scores, fish tissue, or toxicity testing of water or sediment. The addition of physical and chemical data should be included with biological and toxicity data to better understand toxicity assessments, in particular sediment toxicity. Suggested wording will be provided by stakeholder comment letter.

Regarding the assessment of sediment data, it was also suggested the department consider multiple lines of evidence or sediment toxicity tests instead of basing sediment toxicity thresholds on the probable effect concentration (PEC) values developed by McDonald, et al. Staff stated that further discussions may be warranted and that the professionals who developed the PEC thresholds should be present to participate in the discussion. Specific streams were discussed where stakeholders believed additional lines of evidence are necessary. Additional comments will be provided by stakeholder comment letter.

Aquatic Macroinvertebrate Community Data

It was suggested that wording pertaining to “aquatic macroinvertebrate assessments” be retained, instead of using “aquatic biological assessments” to describe macroinvertebrate community health as a function of water quality and habitat (page 20). To ensure clarity, staff will add this wording back into the document.

Within the same paragraph, the term “usually” was also added in association with comparing test streams to reference streams within the same Ecological Drainage Unit (EDU). Clarification was requested by stakeholders and staff provided clarification regarding the addition of this word (page 20). Staff stated that there are instances when similar EDUs may be combined. When EDUs are combined, it

generally relates to cold water streams, and/or when there is only one reference stream within an ecological region of the state (e.g. Mississippi Alluvial Plains).

Assessing Small Streams

There was significant discussion regarding how headwater streams and effluent dominated streams will be assessed against candidate reference streams. Several questions were raised regarding stream class sizes and how those class sizes are defined. Other questions were asked about the status of a current project being completed by the University of Missouri-Columbia (UMC) regarding the process/methods for establishing headwater reference streams (page 26). Stakeholders requested additional discussions on this topic. Once the UMC project is completed, the department plans to have the results of the work presented at an appropriate Water Protection Forum meeting.

Specific questions were raised on how land use-land cover statistics are calculated, and what types of barriers are considered as a migration barrier (page 27). Staff described how land use-land cover information is derived. Examples of migration barriers were provided, including how low water bridge crossings or culverts may operate as barriers. Staff stated that field surveys would be necessary to identify if a migration barrier was present on a stream or stream reach.

Appendix C

It was suggested that the word “significantly” be removed (pages 52 and 53) from the “notes” column since it was not mentioned in the text on page 25. “Headwater” or “smaller than wadeable/perennial” were suggested alternative wording. Discussions continued regarding the definitions of stream classifications provided in the water quality standards. It was suggested that a reference to Table I of the water quality standards be included following the wording for bioreference streams. Staff agreed the removal and addition of specific wording could be made. A stakeholder stated they would also supply suggested wording via comment letter.

Assessing Macroinvertebrate Communities from Poor/Inadequate Habitat

Discussion was requested on how macroinvertebrate samples would be assessed if MSCI scores are less than 16, and the habitat score less than 75 percent (page 23). Horse Creek was provided as an example for how a water body in this situation would be assessed.

It was suggested the percent habitat score from reference be added to the assessment worksheets. Staff agreed this additional information could be added to future biological assessment worksheets.

Age of Data

There was considerable discussion on how the department considers the age of data when conducting assessments. In the past, it was agreed that the department would add a statement to the assessment worksheet providing a justification for using older data. Staff recalled this agreement and indicated a statement would be added to future assessment worksheets.

Mercury in Fish Tissue

There is reference to a Missouri Department of Conservation survey within the LMD and fish tissue assessment worksheets; the status and availability of that MDC document were discussed. It was stated that this document was currently being revised but would be made available by the Missouri Department of Conservation.

Clarification was also provided regarding Department of Health and Senior Services, Department of Conservation, and EPA's values regarding mercury in fish tissue, and if they were consistent with EPA guidance. Staff stated the mercury in fish tissue assessments follow and are consistent with EPA guidance.

Follow-up to the 2016 Listing Methodology Meeting Discussions held in February 2014

Stakeholders asked if all the suggested updates were made to the 2016 LMD. Staff stated that all updates were made, with the exception of adding a statement to assessment worksheets when older data was used during an assessment cycle. Staff will include a statement, as needed, on future assessment worksheets.

Assessment of pH with the clarification in water quality standards

The current water quality standards rulemaking is proposing to clarify pH as a 4-day chronic criterion. Stakeholders were interested in whether this proposed revision would have an effect on assessing pH in the future. Staff presented USGS pH data by EDU to illustrate the current median pH values per EDU. It was suggested by stakeholders that staff look at the pH data by stream size, and time of day to see if that would have an effect. For continuous data, a method was presented to consider how to incorporate a 4-day chronic period and 10 percent exceedance rate. Discussions will continue on how to potentially handle discrete and sonde data at the December 1 public availability meeting. Staff and stakeholders will continue to look at continuous and discrete data sets, and how neighboring states assess pH.

Meeting adjourned early at approximately 12:30 pm after all stakeholder questions were answered.

The department will hold a second public availability session for the 2016 303(d) List and 2018 LMD on December 1, 2015. The public hearing for these documents is scheduled for January 6, 2016, and the public notice period will close on January 31, 2016.